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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Richard Cam

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7590

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EXAMINER

WONG, BLANCHE

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/756,680

Applicant(s)

CAM ET AL.

Examiner

Blanche Wong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 6, 7 and 9-15 is/are rejected.  
7) ☒ Claim(s) 2-5 and 8 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 14,15 are objected to because of the following informalities:

With regard to claim 14, line 3-4, Examiner suggests replacing -- each of said SIPO blocks -- with "each of said plurality of SIPO blocks" in consistent with -- a plurality of SIPO blocks -- in line 3.

With regard to claim 14, line 6, Examiner suggests replacing -- a integer -- with "an integer".

With regard to claim 14, line 8-9, Examiner suggests replacing -- n-bit words of data -- with "n-bit words of serial input data" in consistent with -- n-bit words of serial input data -- in line 5.

With regard to claim 15, line 9, Examiner suggests replacing -- each of said register sets -- with "each of said plurality of M register sets" in consistent with -- plurality of M register sets -- in line 8.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 6,7,9,12-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 7, lines 1 and 2, it is unclear whether the control word is part of the control information.

With regard to claim 9, line 1, it is unclear whether the transfer information is part of the data or control information.

With regard to claim 12, line 1-2, it is unclear what is meant by "said first layer device is a PHY" or whether it means said first layer device PHY.

With regard to claim 14, line 18, it is unclear whether – a plurality of said transition detection blocks – are the same ones as – a plurality of transition detection blocks in line 15.

With regard to claim 14, line 19, it is unclear whether – said M sets of registers – are the same as – said M sets of W registers – in line 17.

With regard to claim 15, line 10, it is unclear whether -- said plurality of data lines – is the 17 input data lines coupled to 17 SIPO blocks correspondingly in lines 2-3.

With regard to claim 15, line 17, it is unclear why n is redefined again in (d) when n is already defined in (a).

With regard to claim 15, line 21, it is unclear whether – a training pattern – is the same as the one in line 15.

With regard to claim 15, line 21 and 26, it is unclear whether -- said registers -- are the same registers.

5. There is insufficient antecedent basis for this limitation in the claim.

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Claim 6 recites the limitation "the training pattern" in line 3.

Claim 7 recites the limitation "control word" in lines 1 and 2.

Claim 13 recites the limitation "said interface" in line 3.

Claim 15 recites the limitation "serial input data" in line 3.

Claim 15 recites the limitation "said 17 sets of registers" in line 14-15, line 16. line 18.

6. **Claim 10** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: between the method according to claim 1 and the single control word recited in claim 10.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claim 1** is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hamalainen et al. (U.S. Pat No. 6,144,676).

With regard to claim 1, Hamalainen discloses

(a) dividing control information into an in-band portion (**control element [in data transmission], col. 1, ln. 28**) and an out-of-band portion (**BCCH or PBCCH, col. 8, ln. 20**);

(b) transmitting the in-band portion of said control information (**control element**) along a path for data (**data frame, col. 1, ln. 23**) from one of said first and second layer devices (**mobile station, col. 1, ln. 29**) to another of said first and second layer devices (**base station, col. 1, ln. 29-30**) (**it is Examiner's position that the mobile station and base station both communicate in first and second layers**), wherein said in-band control information controls data bus lanes and not data (**parity control information for accuracy of the data transmission, col. 1, ln. 24**); and

(c) transmitting the out-of-band portion of said control information along a path for control/signaling (**BCCH or PBCCH**) from one of said first and second layer devices (**base station, col. 8, ln. 19**) to another of said first and second layer devices (**mobile station, col. 8, ln. 21**); and

(d) inserting in said data path (**enhanced data transmission, col. 8, ln. 26**) a control of data signal (**an identification code, col. 8, ln. 31**) to identify when the data path contains control information and when it contains data;

whereby re-encoding of data and insertion of control information (**format**) upon predetermined intervals (**data frame**) is avoided (**mobile station utilizes the data/control format in the data frame proposed by base station, col. 8, ln. 34-35**).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over

Hamalainen in view of Fukui et al. (U.S. Pat No. 6,266,349).

With regard to claim 11, see analysis for claim 1. However, Hamalainen fails to explicitly show (e) transmitting FIFO status flow information out-of-band whereby re-encoding of data and insertion of control information upon predetermined intervals is avoided.

In an analogous art, Fukui discloses transmitting FIFO status flow information **(zero bit insertion to denote the boundaries between the frames and respective circuit 1000 reads out the bits one-by-one, col. 1, ln. 20-21 and 36-43)** out-of-band.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include transmitting FIFO status flow information out-of-band in Hamalainen's method for enhancing data transmission. The suggestion/motivation for doing so would have been to provide for frame detection in a data stream. Fukui, col. 1, ln. 8. Therefore, it would have been obvious to combine Fukui with Hamalainen for the benefit of frame detection in a data stream to enhance data transmission, to obtain the invention as specified in claim 11.

#### ***Allowable Subject Matter***

11. Claims 2-5,8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

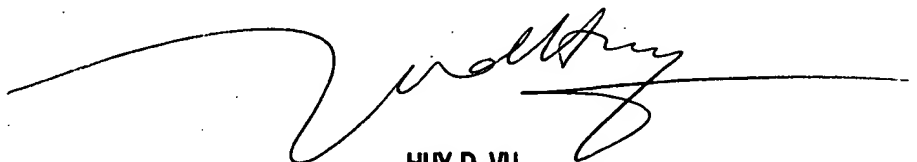
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*BW*

BW

April 6, 2006



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